

PROCEEDINGS
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NOTE ON THE MILK DENTITION OF *DESMODUS*.

BY GERRIT S. MILLER, JR.

Some immature specimens of *Desmodus rufus*, taken by Mr. E. W. Nelson, at Etzatlan, Jalisco, Mexico, in June, 1892, and now in the collection of the United States Department of Agriculture, retain the greater part of the milk dentition, though it is probable that none are young enough to present a complete set of deciduous molars. The extraordinary specialization of the teeth of this bat correlated with the animal's strictly sanguivorous habits make any facts relating to the early development of the teeth of special interest.

In the adult (Fig. 1, e, and 2, c) the dental formula is $i \frac{1-1}{2-2}$, $c \frac{1-1}{1-1}$, $pm \frac{2-2}{3-3}$, = 20. The milk dentition, so far as it can be determined, is as follows: $di \frac{2-2}{2-2}$, $dc \frac{1-1}{1-1}$, $dm \frac{1-1}{2-2}$ = 18.

The largest of the deciduous teeth are the upper incisors (Fig. 1, *di* 1 and *di* 2). These cut

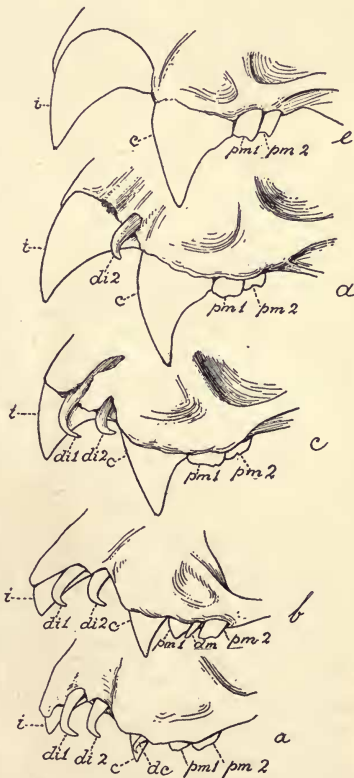


FIG. 1.—Maxillary teeth of *Desmodus rufus*, showing milk dentition and gradual change in form of permanent teeth from very young (a) to adult (e) (X 5).

permanent incisors (Fig. 1, *i*), and even after the appearance of the tips of the latter remain for a considerable period the most conspicuous teeth in either jaw. Their strongly recurved tips are probably of great service to the young when clinging to the nipple of the female during flight. At first the anterior deciduous incisor lies on the outer side of the permanent incisor, while the posterior deciduous incisor occupies the space between the permanent incisor and canine (Fig. 1, *a*). As the permanent incisor increases in size, it gradually extends backward until both milk incisors appear closely appressed to its outer face. In this

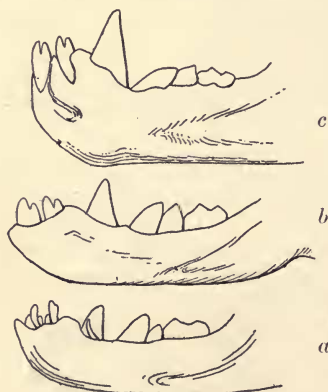


FIG 2.—Mandibular teeth of *Desmodus rufus*, showing part of milk dentition (*a*) and gradual change in form to adult (*c*) ($\times 5$).

condition (Fig. 1, *c*) the teeth remain until the animal acquires a large size, while the second milk incisor often persists in nearly full-grown individuals (Fig. 1, *d*). The deciduous canine (Fig. 1, *a*, *dc*) lies imbedded in the gum on the outer side of the prominence caused by the growing permanent canine. It is shed at an early age, and never becomes in any way functional. A deciduous molar (Fig. 1, *b*, *dm*) was found occupying a position near the posterior outer border of the first permanent upper premolar in two specimens. This tooth lacks

the recurved tip and must be wholly functionless.

In the lower jaw (Fig. 2) the deciduous teeth are smaller and less conspicuous than those in the upper jaw. They are also shed at a much earlier period. On opening the mouth of one specimen (No. 52130) I found two deciduous molars lying loose on the gum over the permanent premolars. The exact position of these milk teeth could not be determined, and I failed to detect any trace of them in other individuals. The deciduous mandibular canine closely resembles its counterpart in the upper jaw, both in size, position, and history. Its tip is, however, less strongly hooked (Fig. 2, *dc*). The deciduous lower incisors (Fig. 2, *di*) are very small and loosely attached to the gum through which they scarcely pierce before they are shed. In form they are totally different from the corresponding upper teeth. Their tips are somewhat widened and faintly notched, thus suggesting the form presented by the permanent lower incisors of many bats.